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Teachers for Our Times

By Karl W. Bigelow*

The widespread interest in teacher education in the decade prior to 1935 produced at least a dozen important fact-finding and status studies. This work and the critical character of education in our times led to a demand for innovation, demonstration, and other activities calculated to encourage actual modifications in programs for the education of teachers. The Commission on Teacher Education of the American Council on Education was established in 1938 in response to this demand.

Purpose and Activities of the Commission

In essence, the Commission's program was a 5-year cooperative venture in stimulating teachers and the educators of teachers to work with special vigor on professional problems that were significant to them. It was an example of how, in a democracy, a voluntary agency without any authority can team with local schools and colleges in using philanthropic funds to improve teachers and teaching.

The Commission initiated and conducted a series of far-reaching field studies upon which its publications are largely based. One was a Nation-wide cooperative enterprise in which 25 teacher-preparing institutions of all types and a similar number and variety of public school systems participated over a period of 3 years. Another comparable venture undertook in 9 States intensive State-wide attacks on the problems of teacher education. A third approach was to set up a collaboration center at the University of Chicago where individuals working in the other 2 projects could further their understanding of related aspects of child growth and development.

The Commission's program had several distinguishing and relatively unusual features. Its purpose was less to discover new facts or elaborate new theories concerning the education of teachers than to stimulate improvements in practice as suggested by already well-established knowledge. The program stressed action. The responsibility and authority of people regularly on the job—those who were actually engaged in preparing teachers or in facilitating their continued growth—were not only recognized but emphasized. The Commission assumed that these people were eager to improve their work and capable of doing so. It saw its own function as one of aiding cooperatively rather than of prescribing and pressing for assent.

The Commission staff undertook to work out jointly with its associates in the schools and colleges plans respecting the services it itself might most usefully render. What was desired—and provided—were opportunities for exchange of experience, for gaining access to superior ideas and practices, for help in planning next steps, and for participation in evaluating results. The Commission arranged many special as well as general conferences; its regular staff members, and also a large number of other experts employed for special purposes, provided consultive services as needed and called for; it organized or provided assistance to a considerable number of summer workshops that were conducted for staff members of cooperating institutions.

Another device that demonstrated its value was that of the collaboration center already referred to. Here was gathered together an un-

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** Dr. Bigelow, who was Director of the Commission on Teacher Education, has returned to his position as Professor of Education at Teachers College, Columbia University.*

usually extensive collection of research materials relating to the growth and development of boys and girls, and, indeed, of human beings generally, for the use of representatives of colleges, universities, and school systems, on brief or extended leave. These men and women devoted their energies to synthesizing the findings of recent biological, psychological, and sociological researches, to working out their implications for teacher education, and to developing plans for changes in their own courses and other activities. Staff members of the collaboration center also worked in the cooperating schools and colleges as consultants.

Publications

From its earliest days the Commission naturally concerned itself with the question of how its work might eventually have the widest possible usefulness. The contacts directly and indirectly provided through its field programs, while by no means inconsiderable, were necessarily limited. Much thought was, therefore, given to what might be accomplished through the written word. During its period of greatest activity the Commission published a periodical *Newsletter* and a number of special pamphlets. Of the latter the following may be mentioned: *Teacher Education in a Democracy at War,* by E. S. Evenden; *Toward Community Understanding,* by Gordon W. Blackwell; *Teachers Enjoy the Arts,* by Ray N. Faulkner and Helen E. Davis.

In addition the Commission also planned an extensive series of reports in which its general views respecting teacher education might be set forth, and its field experiences be described and analyzed. Four such reports have appeared under the imprint of the American Council on Education and four more are in the process of being published.

The four reports already issued are:

Teachers for Our Times (by The Commission, 1944. 178 p.) presents the essential working philosophy that guided all Commission activities. The importance of teaching and of teacher education is established; the national scene is examined in order to see what personal-social needs call for particular attention by schools today; the implications of these needs for the organization and conduct of schools are examined; and the qualities needed in teachers for such schools are set forth.

The College and Teacher Education (by W. Earl Armstrong, Ernest V. Hollis, *and* Helen E. Davis, 1944. 311 p.) offers selected descriptions of work done by the State teachers colleges, colleges of liberal arts, colleges for Negroes, and universities that participated in the Commission's Nation-wide study. Processes and accomplishments are sketched, and the authors offer recommendations based on the experiences recounted.

Teacher Education in Service (by Charles E. Prall *and* C. Leslie Cushman, 1944. 503 p.) shows the responsibility of teachers and administrators for steadily improving teaching. The report describes and analyzes the work of planning committees, policies councils, study groups, school system workshops, individual schools that were freed for experimentation, and personnel projects. The volume concludes with "thoughts about taking hold."

Evaluation in Teacher Education (by Maurice E. Troyer *and* C. Robert Pace, 1944. 368 p.) is filled with illustrative materials, analyses, and suggestions. The chapters of most direct interest to colleges and universities deal with student selection, orientation and guidance, general education, professional education, student teaching, and follow-up studies of recent graduates.

The four reports now in preparation are:

Helping Teachers Understand Children, by the staff of the collaboration center in child development is in press. This 450-page volume reports the progress of teachers in a particular school system in consequence of participation in a program of child study lasting through several years.

Towards Improving Ph.D. Programs by Ernest V. Hollis is also in press. It includes analyses of data on the training and employment of persons who received the doctorate during the decade 1931–40. Ninety-four of the 96 schools granting the degree supplied information. These analyses are related to the views of widely representative "producers and consumers" of Ph.D.'s respecting the nature and administration of the degree.

State Programs for the Improvement of Teacher Education by Charles E. Prall, shortly to go to press, is a general descrip-

tive account and analysis of the experience of the Commission in working with representative groups concerned with the improvement of teacher-education in particular States. These groups, led or at least encouraged by State departments of education, engaged in cooperative study and action in which all teacher-preparing institutions and typical public school systems participated.

Last to be mentioned is the *Final Report* of the Commission, now in preparation. In this volume, the Commission itself will summarize its experience and will set forth those recommendations which that experience has caused it to believe in.

Continuing Activities

The Commission's several field programs were in operation for only 3 to 3½ years, but many activities begun or strengthened during the period have been continued. Thus most of the States with which association was established are maintaining their cooperative programs despite the special difficulties of wartime. The collaboration center has been taken over by the University of Chicago. The majority of colleges, universities, and school systems with which the Commission worked have continued moving forward along lines marked out during the period of the cooperative study. And mutually beneficial relations established between some 16 national and regional educational associations have been continued through the activities of the Council on Cooperation in Teacher Education.

The Commission on Teacher Education, its field studies completed and its publication program determined, went out of existence on September 1, 1944. However, it bequeathed certain responsibilities to a smaller Committee on Teacher Education created by the American Council on Education for the purpose. The Executive Secretary of that Committee is Dr. L. D. Haskew, 525 West 120th Street, New York 27, N. Y., on leave as Professor of Education at Emory University.

Visual Aids for War Training

By C. F. Klinefelter*

The U. S. Office of Education in 1940 planned a program for the training of defense workers by vocational schools and by engineering colleges. An appropriation was obtained from the Congress, and in July 1940 school shops began short intensive training courses to prepare unemployed and other workers to enter defense occupations.

At the same time it was recognized that thousands of practical mechanics would be brought into the defense training program as instructors to offer the courses, at a time when there would be no opportunity to give them preparatory training in the techniques of how to teach their job skills to others. Plans were made, therefore, for a program of specially made visual aids as auxiliary tools to assist the shop instructors.

Visual Aids Program

In the spring of 1941, funds were made available to begin the Visual Aids Program, and a small staff was secured to carry on the work. Contracts were awarded to industrial producing companies to make visual aids in accordance with detailed specifications developed in the Office of Education and under close supervision of staff members. Three weeks before the Japanese attack on Pearl Harbor, 18 of the sound motion picture films were made available to the schools and to industries. A separate appropriation for this work was made by the Congress in 1942, and an additional appropriation was made in 1943. The project will close on June 30, 1945.

By the time the project is completed nearly 500 sound motion pictures will have been produced. The subjects selected were those deemed most critical for the war industries and approved by the chairman of the War Manpower Commission. In general the films have been made to portray specific job operations in detail and step by step. In addition, some films have been produced to give certain basic information which it is deemed essential that the worker possess.

** Dr. Klinefelter, Assistant to the Commissioner, U. S. Office of Education, has general charge of the Visual Aids Program. The Director of the program is Floyde E. Brooker.*

These visual aids have been made for use both in the vocational schools of secondary grade and in the colleges and universities offering training under the Engineering, Science, and Management War Training Program. They stand as one of the major achievements of wartime education. Their use in schools and industrial plants has speeded up training, improved instruction, and increased production. Of perhaps equal importance is the value of these visual aids to American peacetime education. Over 90 percent of the subjects deal with basic skills and understandings. They have a permanent place in American industry and in American education.

Accompanying many of the motion pictures are: (1) A filmstrip, which sets forth for class discussion the important points in the film, and (2) an instructor's manual which contains suggestions for using the visual materials. The motion picture, filmstrip, and manual form an "instructional unit of visual aids."

Visual Aids for College Teaching

Some of the visual aid units which are especially suitable for use on the college level are:

149. Hardness Testing (Rockwell), 750 feet
150. A New Supervisor Takes a Look at His Job, 475 feet
151. Planning and Laying Out Work, 375 feet
152. Maintaining Good Working Conditions, 325 feet
153. Working With Other Supervisors, 275 feet
154. Introducing the New Worker to His Job, 575 feet
155. Instructing the Worker on the Job, 500 feet
156. Placing the Right Man on the Job, 475 feet
157. Supervising Workers on the Job, 375 feet
158. Supervising Women Workers, 400 feet
159. Maintaining Workers' Interest, 475 feet
161. Every Minute Counts (Lateness, Loafing, and Absenteeism), 375 feet
163. Improving the Job, 300 feet
164. Maintaining Quality Standards, 375 feet
165. Employing Blind Workers in Industry, 600 feet
166. Instructing the Blind Worker on the Job, 600 feet
167. Using Visual Aids in Training, 500 feet
168. The Supervisor as a Leader. Part I, 500 feet
169. The Supervisor as a Leader. Part II, 475 feet
173. X-Ray Inspection, 750 feet
174. Measurement With Light Waves, 550 feet
175. The Electron—An Introduction, 575 feet
176. The Diode—Principles and Applications, 625 feet
179. The Slide Rule (Multiplication and Division), 850 feet
348. Tension Testing, 750 feet
354. The Slide Rule (Percentage, Proportion, Squares, and Square Roots), 750 feet
367. Flue Gas Analysis (Orsat Apparatus), 675 feet

How to Obtain Visual Aids

The motion pictures and filmstrips may be purchased from the contractual distributor of all U. S. Office of Education visual aids, Castle Films, Inc., 30 Rockefeller Plaza, New York 20, N. Y., or from more than 200 visual education dealers throughout the country. The manuals are free.

The 1945 catalog of Visual Training Aids produced by the U. S. Office of Education, U. S. Department of Agriculture, War Department, and Navy Department, is now available and may be had from Castle Films, Inc., or from the Division of Visual Aids, U. S. Office of Education, Washington 25, D. C.

Transportation to Athletic Contests

In view of the increasingly acute transportation situation, National Collegiate Athletic Association officials and J. Monroe Johnson, Director of the Office of Defense Transportation, have agreed to a 15-point program which has been indorsed by Dr. John W. Studebaker, U. S. Commissioner of Education, and Dr. Paul E. Elicker, Executive Secretary of the National Association of Secondary School Principals of the National Education Association. The program is:

1. Localize and simplify schedules of athletic contests.
2. Exclude contests involving an absence of more than 48 hours from campus.
3. Eliminate all unreasonably long trips.
4. Schedule contests only for the home grounds of one or the other of the competing teams, or for urban playing fields located between the respective home grounds of the competing teams.
5. Limit ticket sales for all events to the immediate vicinities in which those events are taking place.
6. Other considerations balancing, schedule contests at places where spectators are already located rather than at places to which spectators travel.
7. Discourage attendance at away-from-home contests by undergraduates, by alumni and other sports followers not residents in the immediate vicinities of those contests.
8. Route team trips away from congested transportation centers and away from main arteries of travel.
9. Reduce to an absolute minimum the number of athletes making trips for contests away from home.
10. Limit the number of coaches, and of cheerleaders and managers, and completely exclude from traveling parties, bands and supernumeraries not essential to the conduct of competition.
11. Where feasible, eliminate transportation of equipment through use by both competitors of home team's equipment.

12. Wherever feasible, replace home-and-home competition by two or more contests at a single location.
13. Eliminate from schedules all events not essential to the proper conduct of a sound program of athletics.
14. Eliminate high school tournaments or meets that involve the use of transportation facilities beyond a suburban area.
15. Eliminate participation in post-season events.

The ODT director has warned that unless transportation conditions improve markedly before the football season, games scheduled to be played at other than home fields would have to be eliminated. In addition, he stated that transportation requirements for all sports would have to be further curtailed if the need for military and other essential transportation required such action.

Many Students Leave New York State For College Training

The findings in a recent report on the migrations of college students to and from the State of New York furnish an answer to the question: Does New York as a State meet its responsibility to provide opportunities for the higher education of its youth? *

Excess of Student Migration From New York Over Student Migration to New York

The report shows that in contrast to the 17,453 out-of-State students who in 1941–42 went to New York for college, 31,639 left the State for college. In 13 out of 18 fields of study, the migration from New York to other States was found to exceed the migration to New York. In arts and sciences, 19,009 New York students migrated to other States, while only 6,975 residents of other States went to New York.

In each of the fields of engineering, dentistry, business, law, graduate arts and sciences, and agriculture, the migration from New York exceeded that to New York by more than 100 students. In each of 6 other fields, the excess was fewer than 100 students. Migration to New York exceeded the migration from New York only in the fields of music, nursing, education, architecture, and theology.

Of New York residents who were students in dentistry, the graduate arts and sciences, and theology, 46 to 53 percent were registered outside their home State in 1941–42. In social work, veterinary medicine, medicine, and undergraduate arts and sciences, the percentage ranged from 30 to 39. And for 7 other fields the percentage ranged from 15 to 23.

Reasons for Student Migration From New York

In seeking a reason for the heavy migration of students from New York, three possibilities were considered: (1) The difference in quality between college programs offered in New York and those in other States; (2) the capacity of New York colleges; and (3) the greater costs at New York colleges as compared with costs at out-of-State colleges. So far as the quality of college work is revealed by accreditation, there was not found to be sufficient difference in most fields to justify a heavy migration of students from the State. There proved to be no lack of facilities, as "in every field of preparation, except veterinary medicine, the New York colleges could have accommodated additional students in 1941–42." The study showed, however, that the unused facilities in New York colleges varied considerably in character, "almost none being available which were both of low cost to the student and of high quality."

Tuition-free college instruction is provided in the 16 New York State tax-supported professional colleges and in the 4 municipal colleges of New York City. In 1941–42, 9 percent of New York students attended State-supported colleges and 30 percent attended the New York City colleges. The remaining 61 percent of the New York students were registered in non-tax-supported colleges. In general, the State-supported colleges provide instruction in few fields and to only a small number of students. About 95 percent of the New York students who migrated to other States studied in fields not offered by the State colleges in New York.

In the New York tax-supported colleges, 98 percent of those in attendance paid in fees and for books and supplies, and board and room less

* The title of the report is *Must Thousands Leave New York State for College*. See the list of pamphlets in this issue of *Higher Education*.

than $600; in non-tax-supported colleges, for the same items, about 17 percent of the residents of New York paid $950 or more, 62 percent paid between $750 and $949, and 21 percent paid below $750.

About 33 percent of New York residents attending colleges in other States paid for fees, books and supplies, board and room, $950 or more, 22 percent paid between $750 and $949, and 45 percent paid below $750. Of the 31,639 New York students who attended colleges in other States, more than 14,400 chose institutions with costs below $750. In fact, more New York students were accommodated at out-of-State colleges at costs below $750 than were registered at comparable costs in all the non-tax-supported colleges in New York combined.

Although large numbers leave the State for low-cost opportunities, it is stated that many are discouraged altogether from planning college careers because of their limited means. The report concludes: "These facts indicate that New York needs to adopt some positive measures to meet the demands of its youth for higher education at relatively low cost to the student."

Sources of Income of New York Colleges

Only 8 percent of the total current support of higher education in New York is provided by State tax funds. Eleven percent comes from the tax funds of New York City for the operation of the four municipal colleges. Forty-seven percent is provided by student fees, the major source of income of most of the non-tax-supported colleges. Of the remaining sources of college support in New York State, endowment earnings provide 19 percent; private gifts and grants, 7 percent; Federal funds, 1 percent; and other sources, 7 percent.

Regents Plan for the Future

To offset the large migration of college students from New York and to provide higher educational opportunities to a greater number, the Board of Regents of New York proposes a three-fold program: (1) To increase the number of State scholarships so as to provide for at least 1 in every 10 high-school graduates, instead of 1 in every 160 as at present, and to raise the annual value of the scholarships from $100 to $350; (2) to provide improved facilities in the State-supported professional schools, based upon studies of needs and resources, so that they are adequate and are maintained at the highest possible level; and (3) to establish 2-year institutes of applied arts and sciences in the larger population centers of the State to meet the demands of business and industry for technically trained men and women in industry.

Enrollments in Colleges for Negroes Increase

Enrollments in colleges and universities for Negroes in 1944–45 increased 27 percent over the previous year, according to Martin D. Jenkins, associate professor of education at Howard University, who conducts an annual survey of enrollments in Negro institutions of higher learning. Ninety-seven institutions reported a total of 35,033 resident undergraduate college students during the fall term of 1944–45. Almost all of the institutions reported gains. Men constituted less than one-fifth of college enrollments in 1944–45; in prewar years they made up 45 percent of the enrollments. One-half of the men students were freshmen, almost all of whom, the report states, were below draft age.

In contrast with the increase in enrollments, the number of degrees granted in 1944–45 greatly decreased. In 75 four-year institutions, the number of degrees granted was 4,688, or 14 percent less than in the preceding year. Nine out of 10 degrees were granted to women.

Fourteen institutions for Negroes offer graduate work leading to the master's degree. Thirteen of these institutions had a total of 565 graduate students in attendance during the fall term 1944–45; whereas, during the school year 1943–44, they had a total of 2,043. Ten institutions conferred a total of 172 master's degrees during the last school year.

The report of the survey is printed in the Spring Issue of the *Journal of Negro Education,* published at Howard University, Washington, D. C.

Foreign Students in the Colleges and Universities of Michigan

A survey of foreign students in the 55 colleges and universities in Michigan, as of November 1, 1944, has been made by Earl E. Mosier, chief of the Division of Teacher Personnel, Michigan State Department of Public

Instruction, and the following facts have been reported:

Number of Foreign Students

A total of 659 foreign students were enrolled in 20 colleges and universities, which was somewhat less than 2 percent of the higher education enrollments in the State. In this case a foreign student was defined as "any student whose residence is outside continental United States."

The following approximate percentages indicate the geographical distribution of 566 of the students:

Latin America	34
Argentina, Bolivia, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, Guatemala, Haiti, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, El Salvador, Uruguay, Venezuela	
British Commonwealth	19
Canada, Great Britain, India, Jamaica, Nigeria, Trinidad, Union of South Africa	
Far East	14
China, Japan, Korea, Philippine Islands	
Europe	13
Austria, Czechoslavakia, Germany, Iceland, Italy, Lithuania, Netherlands, Poland, Spain	
Near East	12
Egypt, Iran, Iraq, Turkey	
United States Territories and Possessions	8
Alaska, Canal Zone, Hawaii, Puerto Rico, Virgin Islands	
Total	100

Observations Reported by the Institutions

Observations reported by the colleges and universities are: (1) The total number of foreign students has remained about the same since 1938, but there have been significant changes in the regions or countries from which students have come; (2) the gains in enrollments are from Latin America and the Near East; (3) undergraduate foreign students have declined in number, and marked increases have been reported in technical and graduate study; (4) a number of foreign students have joined the United States and Allied Forces while attending college in Michigan; (5) scholarships and grants-in-aid from established endowments and foundations in the United States and foreign countries seem to be a major source of income for foreign students; (6) proposals are being studied to facilitate exchange of students and faculty members with foreign countries following the war.

Problems Reported

Problems in the education of foreign students as reported by the 20 colleges and universities indicated above are:

(1) Selection of students most likely to succeed has become a serious problem. War conditions have affected the administration of the normal selection processes in foreign countries;

(2) Even the most competent students experience difficulty in listening to or speaking English. Although their training in English grammar and construction has been adequate, college officials report that necessary language adjustment causes serious loss;

(3) Personal and social adjustments to American customs and traditions handicap the student in realizing maximum achievement. This is especially significant for those foreign students who may study for only a very short time in a Michigan institution;

(4) Illnesses of students and the financial obligations which may result sometimes become a liability to the college or university;

(5) The foreign student experiences difficulty in adjusting to the curriculum organization of colleges and universities in Michigan;

(6) Acceptable living accommodations for foreign students are difficult to secure;

(7) The difference in the standard and cost of living between the foreign country and Michigan creates significant social and financial problems for the student.

THE CLEARING HOUSE

Items from colleges, universities, and higher education associations

Accreditation of Technical Institute Programs

A "study of the possibility of some form of accrediting technical institutes," which has been under way since 1940, by a subcommittee of the Committee on Engineering Schools, Engineers' Council for Professional Development, was completed in April 1944. In the report of its study the subcommittee recommended that the Engineers' Council initiate a program of accreditation of the educational work of technical institutes as soon as it could be done appropriately in view of the war situation.

Following the presentation of the report, the Executive Committee of the Engineers' Council

for Professional Development requested the subcommittee to prepare an outline of criteria and procedure for accrediting technical institute programs. This was done, and the statement of criteria was submitted for approval to each of the eight constituent engineering societies of the Council. Formal notice of approval was given by each.

Accrediting Basis

The basis for accrediting as accepted contains the following provisions:

"*Definition:* Educational programs of technical institute type are essentially technological in nature and intermediate between those of the high school and the vocational school on the one hand and collegiate engineering education on the other. Curricula in this field are offered by a variety of institutions and cover a considerable range as to duration and content of subject matter, but have in common the following purposes and characteristics:

(1) The purpose is to prepare individuals for positions auxiliary to but not in the field of professional engineering.

(2) Curricula are essentially technological in nature, based upon elementary principles of science, require the use of mathematics beyond high school, and employ rational processes rather than rule-of-thumb methods.

(3) Curricula are briefer, more intensive, and more specific in purpose than collegiate engineering curricula, though they lie in the same general field of industry and engineering. Their aim is to prepare individuals for specific technical positions or lines of activity rather than for broad sectors of engineering practice.

(4) Training for artisanship is not included within the scope of education of technical institute type.

"*General Policies:* In view of the diversification of educational programs here considered, the types of institutions that offer them, and the undesirability of enforced uniformity, each program or curriculum falling within the boundaries stated below will be recognized in terms of its own purposes, scope, duration, and content. Published lists of such recognized programs or curricula will indicate their individual characteristics and purposes as well as the name of the curriculum and the institution offering it.

"Accredited curricula shall satisfy the following requirements:

(1) *Duration:* Not less than one academic year of full-time work or the equivalent in part-time work. This will ordinarily require class attendance for not less than 30 hours per week for 2 semesters of 16 weeks each, or the equivalent in part-time study, that is, a total of not less than 960 contact hours.

(2) *Requirements for admission:* High school graduation or the equivalent.

(3) *Curricula:* Technological in nature, employing the application of physical science and the techniques of mathematics to the solution of practical problems, and comprising a prescribed sequence of related courses in a specific field, though not excluding a reasonable amount of elective subject matter.

(4) *Instruction:* By accepted class and laboratory or correspondence methods. Except in programs which may be properly offered by correspondence, laboratory work shall ordinarily comprise an important part of each curriculum.

(5) *Teaching Staff:* Qualified as to education and experience and sufficient in numbers to provide adequate attention to each student.

(6) *Educational Institution:* An organized school or a division of an institution devoted to the specific aim of education of technical institute type; a stable organization having adequate financial support.

(7) *Physical Facilities:* Adequate for the purposes of the curricula offered."

The subcommittee's statement outlines the "organization for accrediting," describes the "accrediting principles and procedures," and provides for an "advisory service" for institutions that may request such service, and for "reinspection and review" of technical institute curricula.

Accreditation of the curricula of technical institutes will be in charge of a Subcommittee on Technical Institute Programs, of which H. P. Hammond, Dean of the School of Engineering of Pennsylvania State College, is chairman.

Affiliation of Dental Schools With Universities

The present Council on Dental Education from the beginning of its activities has expressed its belief that "dental education will thrive best under university auspices" and has endeavored to bring detached dental schools under univer-

sity control and management. Four such schools have become units of universities within the last 3 years, as follows: (1) The Kansas City-Western Dental College has become the School of Dentistry of the University of Kansas City; (2) the Texas Dental College has become the School of Dentistry of the University of Texas; (3) the Atlanta-Southern Dental College has become the School of Dentistry of Emory University; and (4) the School of Dentistry of the North Pacific College of Oregon has become the Dental School of the University of Oregon.

Of the 39 dental schools in the United States 36 are now affiliated with universities, 12 in State universities and 24 in privately controlled universities. Two of the three schools yet remaining outside university control are closely affiliated with medical schools in strong medical-dental centers. Only one school remains detached from either a medical school or a university, and it looks forward to university affiliation.

Seminar in Linguistics and Semantics

To promote closer cooperation among the technical and humanistic departments of the Michigan College of Mining and Technology, the language staff is conducting a faculty seminar in linguistics and semantics. The departments represented are mathematics, physics, chemistry, geography, history, psychology, student counseling, religious activities, languages, and chemical, civil, electrical, geological, and mechanical engineering. The group is studying not only the problems traditionally covered by the course title, but also such communication tools as maps, charts, flowsheets, and the like, with specialists leading the discussions.

Institute on Education for Natural and Human Resources

A combined graduate program of the workshop type will be offered this summer in an Institute on Education for Natural and Human Resources by three units of the University of North Carolina—the Department of Education, the Institute for Research in Social Science, and the School of Public Health. The Institute, open to teachers, school administrators, and health workers, will be held in two sessions, the first from June 11 to July 18, and the second from July 19 to August 24. One or both parts of the program may be taken. The work will cover materials in sociology, community education, economics, geography, and resource-use education, as well as nutrition, social science, and other aspects of health education. It is especially planned to meet the needs of teachers of social studies, eighth-grade teachers in North Carolina, and health educators, but others are eligible. Graduate credit will be available.

Graduate Fellowships in Government

Ten graduate fellowships in Government Management, providing $100 a month and full tuition, are offered by the University of Denver in its Department of Government Management for the 12-month period, September 1945 to September 1946. The purpose is to train students of superior ability and adequate background for positions of responsibility in citizens' organizations engaged in the evaluation of governmental administration, policies, and procedures. The curriculum leads to the degree of Master of Science in Government Management.

During the 9-month resident period students will be assigned major research projects each dealing with an aspect of administration. In addition, they will attend conferences with public officials on the practices and problems of government. At the end of 9 months each will be assigned to a well-established citizens' organization, where, in addition to work with the staff, he will prepare a study which will constitute his thesis requirement. While assigned to projects away from Denver, the students will be visited periodically by faculty members, who will guide and direct their projects. At the end of the field assignment, the students will return to Denver, where they will attend a number of seminars dealing with the problems confronted during the field studies. Expenses for travel to and from the place of field work will be paid by the Department of Government Management of the University.

Course on Small Business

Organization and Operation of a Small Business is the title of a course given at Cleveland College, the downtown college of Western Reserve University. Said to be the first of its kind in the country, the course will give men and women an opportunity to study the selection of a business location, store lay-out, division of investment, personnel management, and advertising.

Rural Library Institute

Under the joint sponsorship of the Colorado State College of Agriculture and Mechanic Arts and the School of Librarianship of the University of Denver, a Rural Library Institute will be held from July 23 through August 10, 1945. There will be two sections of the Institute, the first to be held in Fort Collins July 23 to 27, the second in Denver July 30 through August 10.

Shortage of Engineers in American Industry

A critical shortage of engineering graduates, which will carry over into the postwar period, is revealed in a report dated April 14, 1945, prepared by A. A. Potter, Dean of Engineering of Purdue University.

Because of the increasing urgency of requests for engineers from many of the companies which employ Purdue graduates, Dean Potter sent a questionnaire to about one-third of the approximately 400 companies, to ascertain the extent of their present shortages and future needs. He selected the companies with a view to securing a cross-section of American industry.

Of the 105 companies that replied to the questionnaire, 8, or 7.6 percent, had no need for additional engineers; but 97, or 92.4 percent, indicated a total need of 4,590, or an average shortage of 47 for each company. The companies included both large and small industries distributed under the following categories: aircraft, 7; chemical, rubber, and oil, 25; construction, 3; electrical manufacturers, 18; machinery and automotive manufacturers, 22; railroads and railway supply companies, 3; steel and other raw material, 6; utilities, 6; miscellaneous, 15.

Including but a small percentage of American industries, the survey nevertheless reveals an acute shortage of engineers in 92.4 percent of those industries—a shortage which is indicative of the total need throughout American industry. The shortage is particularly serious, Dean Potter points out, since the civilian graduates from all engineering colleges in the United States during the present year will be less than 2,000, and will be largely physically handicapped individuals.

As to the postwar period, the survey indicates that 3,509, or 36 additional engineers per company, among those questioned, will be needed, and these figures take into consideration engineers that will return from military service.

Government Publications

How to Obtain

(1) Cost Publications: Send request, inclosing remittance (check or money order), to the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.

(2) Free Publications: Request direct from the agency issuing them.

From U. S. Office of Education

Offerings in the Fields of Guidance and Personnel Work in Colleges and Universities, Summer 1945, by Ralph C. M. Flynt and Franklin R. Zeran. Washington, D. C., U. S. Office of Education, 1945. 116 p. (Misc. 3162). Free copies available.

A directory of offerings in counseling, guidance and personnel work in 159 institutions. Lists title and brief description of each course, name of instructor, credit hours, terminal dates, and school or division in which offered. Also lists institutes, workshops, and the like; and degrees offered.

Accredited Secondary Schools in the United States, 1944, by Margaret J. S. Carr. Washington, D. C., U. S. Government Printing Office, 1944. 198 p. (Bulletin 1944, No. 4). 30 cents. Free copies available.

Lists the 22,162 accredited high schools in the States, District of Columbia, and outlying parts of the United States. Contains standards of regional accrediting associations and a list of subject requirements for admission to colleges of liberal arts of State universities.

College Salaries, 1941–42, by Maude Farr. Washington 25, D. C., U. S. Office of Education, 1945. 27 p. multilith. (Circular No. 232)

Reports salaries of 48,714 full-time faculty members in different types of 518 degree-granting colleges and universities for the school year 1941–42, and salaries of staff members in land-grant institutions for 9 college years.

Osteopathy, by Walter J. Greenleaf. Washington, D. C., U. S. Government Printing Office, 1945. 11 p. (Leaflet No. 23, revised 1945)

One of a series of guidance leaflets. Describes osteopathy as a career and indicates the training required.

Pharmacy, by Walter J. Greenleaf. Washington, D. C., U. S. Government Printing Office, 1945. 20 p. (Leaflet No. 14, revised 1945)

One of a series of guidance leaflets. Contains information on pharmacy as a career and preparation for it.

From Other Government Agencies

War Department. Headquarters, Army Service Forces, Information and Education Division. *Post-War Educational Plans of Soldiers.* (Postwar Plans of the Soldier Series, Report No. B-133, 1945) 11 p. multilith.

A statistical analysis of the post-war educational intentions expressed in the summer of 1944 by approximately 20,000 Army officers and enlisted men from every major theatre of the war.

Pamphlets

Educational Research and Nursing Education, by Archer Willis Hurd. Richmond 19, Va., Bureau of Educational Research and Services, Medical College of Virginia, 1945. 80 p. mimeo.

Reports the work of 1½ years in developing and applying a course of study for preparation for nursing.

The English Language in American Education, prepared for the Modern Language Association by a Special Committee. 100 Washington Square East, New York 3, Commission on Trends in Education, Modern Language Association of America, 1945. 32 p.

A statement of basic philosophy of curriculum making and instructional objectives in the English language in schools and colleges. The three parts are: (1) Developments in our understanding of language; (2) the need for the study of English; and (3) the English program.

For Your Student Days in the United States. New Brunswick, N.J., New Jersey College for Women, Rutgers University, 1945. 16 p. illus.

Intended to acquaint students from foreign countries with what to expect on a typical woman's college campus in the United States, supplementing the general information issued by such agencies as the Institute of International Education. Contains information about New Jersey College for Women, campus life, courses offered, probable expenses, and vacation opportunities.

The Junior Colleges of Texas; Community Colleges for the People, edited by C. C. Colvert. Austin, Texas, The University of Texas, 1945. 15 p.

Published to help the taxpayer, the Legislature, and high-school graduates understand the purposes and services of the junior colleges.

Proceedings of the Annual Meeting of the Middle States Association of Collegiate Registrars, 1944. Chambersburg, Pa., The Association, Margaret Vanderzee, Secretary-Treasurer, Wilson College, 1944. 25 p.

Contains four papers and related discussions dealing principally with the work of the college registrar.

Must Thousands Leave New York State for College? By John Stuart Allen and John W. Paige. Albany, N. Y., State Education Department, 1945. 23 p.

The first of a series of popularized reports based on the technical studies of the Division of Research, State Education Department of New York, in the field of higher education; based on the *Migration of College Students to and from New York,* by John Dale Russell and John W. Paige, of which a limited edition is being published for those who are interested in a more detailed analysis. Surveys the pattern of student migration and discusses the Regents' plan for the future.

New York University. Report of the Chancellor, For the Year 1943–1944. New York, New York University, 1944. 69 p.

Sixteenth Annual Report of the New Jersey State Board of Regents to the Legislature of the State of New Jersey. Trenton, N. J., March 19, 1945. 32 p.

Discusses the reorganization and consolidation of the State's educational agencies into a single State Department of Education, summarizes the Board's work since its creation in 1929, and touches on various aspects of higher education in the State.

Standards of Certification for the Teaching of Geography in High Schools. By the National Council of Geography Teachers, Committee on Standards of Certification, Alfred H. Meyer, chairman. Published by The Council, Thomas F. Barton, secretary, Southern Illinois Normal University, Carbondale, Ill. 1943. 20 p.

Discusses growing needs for adequate teacher education and certification in geography. Proposes a "Geography Master Standards Plan" as a suggestive national guide, and indicates how it may be applied. Stresses the importance of comprehending the philosophy, ideologies, and scientific principles of geography, and the art of thinking and teaching "geographically." Advocates more effective map training.

A Study of Recently Erected and Proposed Buildings of Teachers Colleges of the United States—1945, by E. S. Evenden. Prepared for the Committee on Standards and Surveys of the American Association of Teachers Colleges. Oneonta, N. Y., State Teachers College, The Association, Charles W. Hunt, Secretary, 1945. 25 p. mimeo.

Presents data secured from 120 institutions collected in March and April 1945, concerning such items as the number and cost of buildings, and the number with booklets containing floor plans. Specifies buildings of various kinds in 70 teachers colleges considered "worthy of study"; gives summary data on remodeling; indicates

plans for new construction, including approximate costs; and contains other data useful in the postwar planning of buildings.

You and Your College, by John O. Gross *and* Boyd M. McKeown. New York and Nashville, Abingdon-Cokesbury Press, 1945. 63 p.

Intended primarily as a textbook for the course in the youth curriculum of the Methodist Church, "Going to College." The two parts are: I. "Shall I Go to College? Where?" II. "The First Week—and After." Contains a directory of educational institutions related to the Methodist Church.

Books

The Development of Higher Education in Mexico, by George I. Sanchez. New York, Morningside Heights, King's Crown Press, 1944. 140 p.

Reviews the development and present status of higher education; about one-fourth of the book is devoted to higher education today.

Educating Liberally, by Hoyt H. Hudson. Stanford University, Calif., Stanford University Press, 1945. 120 p.

Analyzes the aims and assumptions of liberal education from a philosophic viewpoint. The concluding chapter considers the means to a liberal education as provided by American colleges and universities.

The Educational Process, by Luther Pfahler Eisenhart. Princeton, N. J., Princeton University Press, 1945. 87 p.

A discussion of the educational process and the means of accomplishing it. The major portion of the book is devoted to the college, but there is a chapter on secondary education and one on the graduate school of arts and sciences.

Frontier Thinking in Guidance, edited by John R. Yale. An Anthology of Significant Thought in the Field of Guidance. Chicago 4, Ill., Science Research Associates, 1945. 160 p.

A selection of materials illustrative of frontier thinking in guidance. The editor states, however: "Not all the material in this book is really frontier thinking. Some contributions were included because they were good *summaries* of such thinking, and some selections were included because of their brief and clear coverage of an important topic."

The Humanities Chart Their Course. Report of the Second Annual Conference Held by the Stanford School of Humanities on "The Content of a Humanistic Education," August 11 and 12, 1944. Stanford University, Calif., Stanford University Press, 1945. 78 p.

Includes five committee reports and two public addresses given at the Conference. Among the questions discussed were: (1) What should be the course of the humanities? (2) What is the ideal content of a humanistic education and how to reconcile it with the time that can be allotted to it?

The Teacher in America, by Jacques Barzun. Boston, Mass., Little, Brown, and Co., 1945. 321 p.

Critical essays on higher education in the United States, written by a philosopher-historian with European background, now teaching at Columbia University. Provocative analyses of the theory and practice of college teaching in relation to national culture, treating especially the art of writing and reading, instructional techniques in specific subjects, faculty-administrative relations, and preparation for a faculty career. Other topics are also considered.

Special Note

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